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10/550,093	09/21/2005	Kenichiro Tada	041465-5267	5931

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EXAMINER

DAZENSKI, MARC A

ART UNIT	PAPER NUMBER
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2621

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,093	Applicant(s) TADA, KENICHIRO	
	Examiner MARC DAZENSKI	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 14-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 14-27 is/are rejected.
- 7) ☒ Claim(s) 19, 20, 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9-21-2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 19 is objected to because of the following informalities: line 2 of the claim refers to "the partial information stream." There is insufficient antecedent basis for this in the claim; the examiner recommends changing it to "a partial information stream." Appropriate correction is required.

Claim 20 is objected to because of the following informalities: line 7 of the claim refers to "attached attribute information." There is insufficient antecedent basis for this in the claim; the examiner recommends changing it to "attachment attribute information." Appropriate correction is required.

Claim 22 is objected to because of the following informalities: line 7 of the claim reads, "...so as to recorded it..." when it should read, "...so as to record it..." Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to

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support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. *O'Reilly*, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

Claims 19, and 24- 25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 19 defines a recording medium embodying functional descriptive material, while claims 24 and 25 define an "information recording program" and a "recording medium reproducing program," respectively, embodying functional descriptive material. However, the claim does not define a computer-readable medium or computer-readable memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV).

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The scope of the presently claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program. The examiner suggests amending the claim(s) to embody the program on “computer-readable medium” or equivalent; assuming the specification does NOT define the computer readable medium as a “signal”, “carrier wave”, or “transmission medium” which are deemed non-statutory (refer to “note” below). Any amendment to the claim should be commensurate with its corresponding disclosure.

Note:

A “signal” (or equivalent) embodying functional descriptive material is neither a process nor a product (i.e., a tangible “thing”) and therefore does not fall within one of the four statutory classes of § 101. Rather, “signal” is a form of energy, in the absence of any physical structure or tangible material.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, and 14-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsumagari et al (US PgPub 2003/0142962), hereinafter referred to as Tsumagari.

Regarding **claim 1**, Tsumagari discloses information storage medium, information recording apparatus, and information reproduction apparatus. Further,

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Tsumagari discloses a recording/reproducing apparatus for recording/reproducing packet data that converts received packet data and time information into a format (object data) that can be applied to the information storage medium, which reads on the claimed, "information recording apparatus which records a partial information stream created based on an information stream acquired from the outside in a recording medium," as disclosed at paragraphs [0051], [0054], and exhibited in figure 2; the apparatus comprising:

management information generator (511) which generates management information based on the received packet data and time information, which reads on the claimed, "a first creating device which creates partial attribute information based on attribute information included in the information stream," as disclosed at paragraph [0054];

recording/reproduction apparatus (5) which assigns time information to each packet of the received packet data, and records the packet data on the information storage medium (100) together with the time information, as well as main MPU (510) of the recording reproduction apparatus (5) which generates management information on the basis of the recorded information, and records it on the information storage medium (100), which reads on the claimed, "a first recording device which creates the partial information stream repeatedly including the created partial attribute information so as to record it in the recording medium," as disclosed at paragraph [0049];

SI processor (513) which extracts service information (SI) from the packet data, as well as attribute information generator (512) that generates video/audio attribute

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information from the extracted SI, which reads on the claimed, “a second creating device which creates attachment attribute information for compensating the partial attribute information based on the attribute information,” as disclosed at paragraph [0049]; and

recording/reproduction unit (560) which records or reproduces object data and management information on or from an information storage medium, and SI processor (513) which records SI data as management information, which reads on the claimed, “a second recording device which records the created attachment attribute information in the recording medium separately from the partial information stream,” as disclosed at paragraphs [0049] and [0080].

Regarding **claim 2**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, Tsumagari discloses the management information generator (511) generates management information based on the received packet data and time information, and the data output unit (580) transmits the packet data to the STB (1), which reads on the claimed, “wherein the partial attribute information is standardized so as to be included in the partial information stream and be output essentially,” as disclosed at paragraph [0054].

Regarding **claim 3**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, Tsumagari discloses recording/reproduction apparatus (5) which assigns time information to each packet of the received packet data, and records the packet data on the information storage medium (100) together with the time information, as well as main MPU (510) of the recording reproduction apparatus (5) which generates

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management information on the basis of the recorded information, and records it on the information storage medium (100), which reads on the claimed, "wherein the first recording device replaces a part of the partial information stream with the partial attribute information so as to create the partial information stream," as disclosed at paragraph [0049].

Regarding **claim 14**, Tsumagari discloses everything claimed as applied above (see claim 2). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 3 above.

Regarding **claim 15**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, Tsumagari discloses packet data distributed by a satellite digital broadcast is received by a tuner (2) of a STB (1) via receiver (6), as well as a service information table (SIT) conforming to ARIB STD-B21, which reads on the claimed, "wherein the information stream is acquired by receiving digital broadcasting according to ARIB (Association of Radio Industries and Businesses) standards," as disclosed at paragraphs [0049] and [0076] (wherein, because the SIT conforms to the ARIB STD-B21 standard, and the SIT is included in the received data packets, the receiver (6) must be able to receive digital broadcasting according to ARIB).

Regarding **claim 16**, Tsumagari discloses everything claimed as applied above (see claim 2). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 15 above.

Regarding **claim 17**, Tsumagari discloses everything claimed as applied above (see claim 3). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 15 above.

Regarding **claim 18**, Tsumagari discloses everything claimed as applied above (see claim 4). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 15 above.

Regarding **claim 19**, Tsumagari discloses information storage medium, information recording apparatus, and information reproduction apparatus. Further, Tsumagari discloses a rewritable, disk-shaped information storage medium (100), comprising data area (112) as an area where the user can record information, having a format that allows the presence of both general computer information recording fields and a stream data related information recording field (121), recordable packet data being recorded in Stream Object recording field (131), and information associated with that object recorded in a management information recording field (130), which reads on the claimed, "A recording medium comprising: a first recording area where the partial information stream repeatedly including partial attribute information representing at least attribute information of the partial information stream is recorded; and a second recording area where attachment attribute information for compensating the partial attribute information is recorded," as disclosed at paragraph [0060] and exhibited in figure 5.

Regarding **claim 20**, Tsumagari discloses a recording/reproducing apparatus for recording/reproducing packet data, which reads on the claimed, "a recording medium

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reproducing apparatus which reproduces the recording medium according to claim 19," as disclosed at paragraph [0051]; the apparatus comprising:

recording/reproduction unit (560), which reproduces (transfers) video data recorded as stream objects on the information storage medium, which reads on the claimed, "a first detecting device which detects the partial information stream recorded in the first recording area," as disclosed at paragraph [0089];

MPEG decoder which acquires a PID of an MPEG-TS from the PAT and PMT, which reads on the claimed, "an extracting device which extracts the partial attribute information from the detected partial information stream," as disclosed at paragraph [0089];

SI processor which extracts SI data and then transfers it as an MPEG packet to the decoder of the STB, and then transferring the PAT and PMT tables to the decoder, and when all the SI data are transferred, a counter that measures the reproduction timing in the time measurement unit of a player is set to be APATx (ST209), and reproduction starts from an MPEG-TS packet having time information APATx (ST210), which reads on the claimed, "a second detecting device which detects the attached attribute information recorded in the second recording area; a first creating device which compensates the extracted partial attribute information based on the attachment attribute information so as to create stream attribute information; a second creating device which creates partial information stream repeatedly including the created stream attribute information; and an output device which outputs the created partial information

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stream,” as disclosed at paragraphs [0090]-[0095] (wherein the reproduction process is exhibited in figure 18).

Regarding **claim 21**, Tsumagari discloses everything claimed as applied above (see claim 20). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 20 above.

Regarding **claim 22**, the examiner maintains that the claim is the corresponding method claim to the apparatus of claim 1, and therefore the limitations of the claim are rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 23**, the examiner maintains that the claim is the corresponding method claim to the apparatus of claim 20, and therefore the limitations of the claim are rejected in view of the explanation set forth in claim 20 above.

Regarding **claim 24**, the limitations of the claim are rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 25**, the limitations of the claim are rejected in view of the explanation set forth in claim 20 above.

Regarding **claim 26**, Tsumagari discloses everything claimed as applied above (see claim 24). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 24 above.

Regarding **claim 27**, Tsumagari discloses everything claimed as applied above (see claim 25). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 25 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC DAZENSKI whose telephone number is (571)270-5577. The examiner can normally be reached on M-F, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
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